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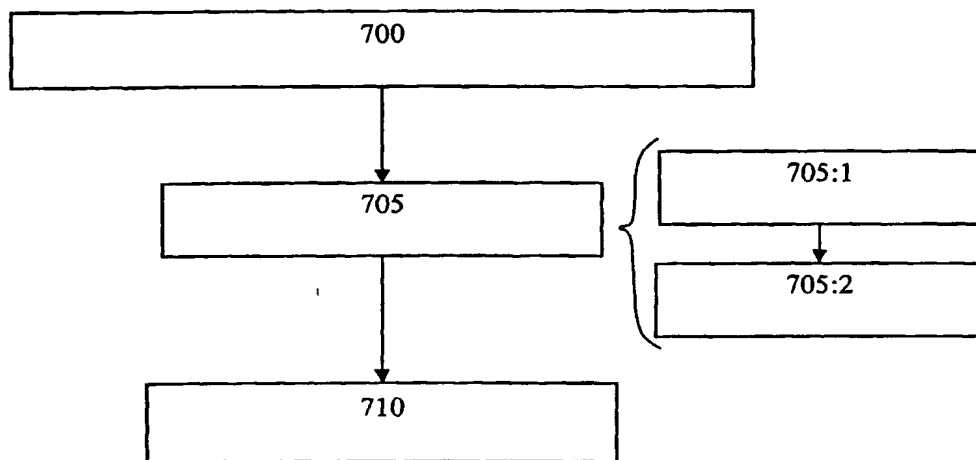
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(54) Title: METHOD AND ARRANGEMENT FOR PRODUCING CONTRAST AGENT FOR MAGNETIC RESONANCE IMAGING



(57) Abstract: The present invention relates to an arrangement and a method for providing contrast agent for e.g. MRI (Magnetic Resonance Imaging) and NMR (Nuclear Magnetic Resonance) applications. The method according to the invention comprises the steps of obtaining (100) a solution in a solvent of a hydrogenatable, unsaturated substrate compound and a catalyst for the hydrogenation of a substrate compound, hydrogenating (105) the substrate with hydrogen gas (H₂) enriched in para-hydrogen (p-¹H₂) to form a hydrogenated contrast agent and exposing (110: 705) the contrast agent to a magnetic field cycling profile adapted for enhancing the contrasting effects of the contrast agent. The magnetic field cycling profile comprises an initial decrease of the magnetic field followed by at least one increase of the magnetic field, which increase should be arranged as to give a non-adiabatic (diabatic) remagnetisation of the contrast agent.

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